



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,298	06/12/2006	Gordon N. Gill	1034123-000169	6198

41790 7590 01/31/2008  
BUCHANAN, INGERSOLL & ROONEY LLP  
P.O. BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER
----------

SWOPE, SHERIDAN

ART UNIT	PAPER NUMBER
----------	--------------

1652

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

01/31/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com  
debra.hawkins@bipc.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/552,298	GILL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sheridan L. Swope	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-42 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

Claims 1-42 are pending.

### *Election/Restrictions*

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1:  
In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

It is noted that there are two claims numbered "36". Also, it is unclear which claim Claim 40 is dependent from; it is assumed that Claim 40 is dependent from Claim 39.

Group I, Claims 1-10 drawn to a polynucleotide, vector, host cell, and method of making the encoded polypeptide.

Group II, Claims 11-23, drawn to a polypeptide.

Group III, Claims 24 and 25, drawn to an antibody.

Group IV, Claims 26-31 and 42, drawn to a method for promoting differentiation using a polynucleotide.

Group V, Claim 32, drawn to a method for inhibiting differentiation using a polynucleotide.

Group VI, Claim 33, drawn to a method for promoting RNA polymerase II-mediated transcription using a polynucleotide.

Group VII, Claims 34-36a, drawn to an inhibitor of small CTD phosphatase.

Group VIII, Claim 36b, drawn to a method for promoting differentiation using an inhibitor of small CTD phosphatase expression.

Group IX, Claim 37, drawn to a method for promoting differentiation using an antibody.

Group X, Claim 38, drawn to a method for identifying a modulator of a polypeptide.

Group XI, Claims 39 and 40, drawn to a method for modulating differentiation using a SCP modulator.

Group XII, Claim 41, drawn to a method for transplanting a stem cell into a patient.

For each of Inventions I-XII above, restriction to one or more of the following is also required. Therefore, election is required of one of Inventions I- XII and, one or more of Inventions (A)-(PP), as indicated.

If Invention I is elected, elect one of:

- (A.) SEQ ID NO: 1 or encoding SEQ ID NO: 2
- (B.) SEQ ID NO: 3 or encoding SEQ ID NO: 4
- (C.) SEQ ID NO: 5 or encoding SEQ ID NO: 6
- (D.) SEQ ID NO: 7 or encoding SEQ ID NO: 8
- (E.) SEQ ID NO: 9 or encoding SEQ ID NO: 10
- (F.) SEQ ID NO: 11 or encoding SEQ ID NO: 12
- (G.) ATCC BE300370
- (H.) ATCC AL520011
- (I.) ATCC AL520463

If Invention II, III, IX, or X is elected, elect one of:

- (J.) SEQ ID NO: 2
- (K.) SEQ ID NO: 4
- (L.) SEQ ID NO: 6
- (M.) SEQ ID NO: 8
- (N.) SEQ ID NO: 10
- (O.) SEQ ID NO: 12
- (P.) Encoded by ATCC BE300370
- (Q.) Encoded by ATCC AL520011
- (R.) Encoded by ATCC AL520463
- (S.) SCP1
- (T.) SCP2
- (U.) SCP3

If Invention IV is elected, elect one of:

- (V.) SEQ ID NO: 10
- (W.) SEQ ID NO: 12

If Invention IV is elected, also elect one of:

- (X.) Neuron
- (Y.) Glial cell
- (Z.) Microglial cell
- (AA.) Astrocyte

If Invention V is elected, elect one of:

- (BB.) SEQ ID NO: 2
- (CC.) SEQ ID NO: 4
- (DD.) SEQ ID NO: 6

(EE.) SEQ ID NO: 8

If Invention VI is elected, elect one of:

(FF.) SEQ ID NO: 10

(GG.) SEQ ID NO: 12

If Invention VII or VIII is elected, elect one of:

(HH.) Small molecule inhibitor

(II.) Nucleic acid molecule

If Invention VII is elected, also elect one of:

(JJ.) SEQ ID NO: 1 or encoding SEQ ID NO: 2

(KK.) SEQ ID NO: 3 or encoding SEQ ID NO: 4

(LL.) SEQ ID NO: 5 or encoding SEQ ID NO: 6

(MM.) SEQ ID NO: 7 or encoding SEQ ID NO: 8

If Invention XI or XIII is elected, elect one of:

(NN.) SCP1

(OO.) SCP2

(PP.) SCP3

The inventions listed as Group I relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they comprise the same or corresponding special technical feature, a specific polynucleotide and a method of using said polynucleotide to make the encoded polypeptide.

The products of Groups II, III, and VII are not so linked to Group I as to be encompassed by said single general inventive concept because said products do not share a common structure and function with the product of Group I. The methods of Groups IV-VI and IX-XII are not so linked to Group I as to be encompassed by said single general inventive concept because said methods do not share the same modes of operation, functions, or effects of the methods of Group I. In addition, the methods of Groups IV-VI and IX-XII do not comprise all of the methods for making or using the products of Groups II, III, and VII.

Likewise, the sub-inventions (A.)-(PP.) are not so linked as to be encompassed by a single general inventive concept. The technical feature linking sub-inventions (A.)-(PP.) is that they all relate to phosphatases. However, phosphatases were well known in the art (Bollen et al, 2002). Therefore, said technical feature is not a special technical feature as it is not free of the art.

A search for more than one of Inventions I-VII would be a burden on the Office for the following reasons.

Because the products of Inventions I-III and VIII are structurally and/or functionally distinct entities, a search for one said invention would not encompass a search for any other invention and searching all of Inventions I-III and VIII, or a subset thereof would be a burden on the Office.

Because the methods of Inventions I, IV-VI, and IX-XII comprise different steps, utilize different products, and/or produce different results, a search for one said invention would not encompass a search for any other invention and searching all of Inventions I, IV-VI, and IX-XII, or a subset thereof would be a burden on the Office.

A search for the products of Inventions I-III and VIII would not encompass a search for the methods of Inventions I, IV-VI, and IX-XII, or vice versa, because said methods are not the only methods of making and/or using said products. Thus, a search of any of Inventions I-III and VIII with any of Inventions I, IV-VI, and IX-XII would be a burden on the Office.

A search for more than one of sub-inventions (A.)-(PP.) would be a burden on the office because said products, or methods of using said products, do not share a common structure and function.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention and, if appropriate, a sub-invention or species to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found

allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the Official Gazette notice dated March 26, 1996 (1184 O.G. 86; see also M.P.E.P. 821.04, In re Ochiai, and In re Brouwer). Process claims that depend from or otherwise include all the limitations of the patentable product will be entered as a matter of right, if the amendment is presented prior to final rejection or allowance, whichever is earlier. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. To be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### *Final Comments*

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

To insure that each document is properly filed in the electronic file wrapper, it is requested that each of amendments to the specification, amendments to the claims, Applicants' remarks, requests for extension of time, and any other distinct papers be submitted on separate pages.

It is also requested that Applicants identify support, within the original application, for any amendments to the claims and specification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheridan L. Swope whose telephone number is 571-272-0943. The examiner can normally be reached on M-F; 9:30-7 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private

Application/Control Number:  
10/552,298  
Art Unit: 1652

Page 7

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sheridan Lee Swope, Ph.D.  
Art Unit 1652



**SHERIDAN SWOPE, PH.D.**  
**PRIMARY EXAMINER**